# HIV and Tuberculosis

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## Fast Facts

- All people newly diagnosed with HIV should be tested for TB infection.
- People with latent TB infection are at much higher risk for progressing to active TB disease if they also live with HIV.

Tuberculosis, or TB, is caused by the bacterium *Mycobacterium tuberculosis*, which can be present as either latent TB infection or TB disease. Latent TB infection means that TB bacteria are living in the body but not causing any symptoms, and people with latent TB are not sick, have no symptoms, and cannot spread TB bacteria.

TB disease means the bacteria are multiplying and destroying body tissues, and people with TB disease are sick, have symptoms, and may be able to spread the bacteria to others. Persons with TB disease of the lungs or throat can spread TB bacteria from person to person through coughs, speaking, or singing.

People at high risk for exposure to or infection with *M. tuberculosis* include

- Contacts of people known or suspected to have TB disease;
- People who come to the United States from areas of the world where TB is common (for example, Asia, Africa, Russia, Eastern Europe, or Latin America);
- People who visit areas of the world with a high prevalence of TB disease, especially if visits are frequent or prolonged;
- People who live or work in high-risk congregate settings (for example, nursing homes, homeless shelters, or correctional facilities); and
- Health care workers who serve patients who are at increased risk for TB disease.

People with HIV and latent TB infection need treatment as soon as possible to prevent TB disease. People with latent TB infection who have HIV are much more likely to progress to TB disease, and HIV infection is the strongest known risk factor for TB disease.

Unfortunately, some people with HIV do not know they also have latent TB infection. Similarly, some people with TB disease are unaware of their HIV status, although HIV status reporting for people with TB is improving. **All people newly diagnosed with HIV should be tested for TB infection as soon as possible. People living with HIV and at ongoing risk for TB exposure should be tested annually. CDC also recommends that anyone who has TB disease, is suspected of having TB disease, or is a contact of a TB patient be tested for HIV.**

Untreated latent TB infection can quickly progress to TB disease in people living with HIV since the immune system is already weakened. And without treatment, TB disease can progress from sickness to death. Fortunately, there are a number of treatment options for people living with HIV who also have either latent TB infection or TB disease. People living with both HIV and TB should consult with a health care provider or their state or local health department for treatment options.

## The Numbers

- In 2012, approximately 1.2 million people in the United States were living with HIV, 13% of whom did not know they were infected.
- A total of 9,421 TB cases (a rate of 2.96 cases per 100,000 persons) were reported in the United States in 2014. Since the 1992 peak of TB resurgence in the United States, the number of TB cases reported decreased each year between 1992 and 2014.
- In 2014, 89% of patients with TB disease had a known HIV status.
- Among the 8,168 people with TB who had a documented HIV test result in 2014, 6% were coinfected with HIV.
- In 2014, 66% of reported TB cases in the United States occurred among foreign-born persons. The TB case rate among foreign-born persons (15.4 cases per 100,000 persons) was approximately 13 times as high as among US-born persons (1.2 cases per 100,000 persons).
- In 2014, the rate of TB per 100,000 persons was 5.1 among blacks or African Americans, 5.0 among Hispanics/Latinos,[a] and 0.6 among whites.

[a] Hispanics/Latinos can be of any race.

## Prevention Challenges

- **Lack of awareness of TB or HIV status** can prevent adequate treatment. Anyone who is newly diagnosed with HIV should be tested for TB infection. Anyone diagnosed with latent TB infection or TB disease should be tested for HIV. Without treatment, each disease increases the severity of the other. TB disease is an AIDS-defining condition. Worldwide, TB is a leading cause of death among people living with HIV.
- **Multidrug-resistant TB (MDR TB)** is resistant to at least two of the best anti-TB drugs—isoniazid and rifampin. MDR TB is hard to treat and can be fatal. People with HIV are at greater risk of dying of MDR TB than those without HIV. Extensively drug-resistant TB is a rare type of MDR TB that is resistant not only to isoniazid and rifampin, but also to any fluoroquinolone and at least one of three injectable second-line TB drugs. It is extremely hard to treat, and the remaining treatment options are less effective. To prevent the continued emergence of drug-resistant strains, treatment for TB must be improved worldwide.
- **Possible drug interactions** can interfere with treatment, so using the right drugs is important. Recommendations for treating latent TB infection or TB disease in adults with HIV are, with a few exceptions, the same as those for adult TB patients who are not HIV infected. However, managing HIV-related TB disease is complex. People with HIV and TB disease should seek care from health care providers with expertise in the management of both diseases.
- **Diagnosis and treatment of latent TB infection among high-risk groups** require a new expanded approach. The majority of US TB cases are now believed to be associated with longstanding untreated latent TB infection, and most of these cases occur among individuals who were born outside the United States and were infected many years earlier. The risk may be higher for persons who also have HIV infection; therefore, testing for TB infection is very important for persons with or at risk for HIV infection.
- As with HIV, **socioeconomic factors**—such as limited access to quality healthcare, poverty, homelessness, and substance abuse—contribute to the disproportionate burden of TB in some racial/ethnic groups, including African Americans and Hispanics/Latinos.

## What CDC Is Doing

CDC and its domestic and international partners are taking many steps to prevent the further spread of TB and to reduce the overall burden of the disease. Efforts include:

- Assessing new TB diagnostic techniques;
- Developing new treatment regimens;
- Increasing the capacity of health professionals to provide adequate patient care by offering training and promoting evidence-based guidelines; and
- Continuing to address and support global TB control, since foreign-born people account for more than half of TB cases in the United States.

The goal of controlling and eventually eliminating TB requires a focused, continual effort to meet the prevention and treatment needs of people most at risk, including those living with HIV. The strategy of preventing and treating TB in people living with HIV is therefore essential to achieving the goal of TB elimination in the United States.

### Additional Resources

**CDC-INFO**
1-800-CDC-INFO (232-4636)
www.cdc.gov/info

**CDC HIV Website**
www.cdc.gov/hiv

**CDC Act Against AIDS Campaign**
www.cdc.gov/actagainstaids

**CDC TB Website**
http://www.cdc.gov/tb